



EU Wastewater Observatory for Public Health

EXECUTIVE SUMMARY

- Updated data on SARS-CoV-2 wastewater surveillance is accessible at the national level for 16 out of the 27 EU countries.
- Data on other pathogens is up-to-date for three EU countries. Specifically, Finland is monitoring Influenza A, B, and RSV; Hungary is actively observing Influenza A; and Sweden is conducting surveillance for Enteric and Influenza viruses.
- Information regarding updated data from wastewater surveillance for SARS-CoV-2 is available for one EU neighborhood country and eight countries outside the EU
- Information on the detection of FLiRT variants in wastewater was reported by seven EU countries and four countries outside the EU.

After observing a rapid increase in COVID-19 cases in certain areas, the EU Wastewater Observatory for Public Health has asked its community of practice for information on the recent detection of the KP.1 or any of the FLiRT variants in wastewater. This updated version of the May bulletin includes the feedback obtained, together with the most recent wastewater surveillance data primarily obtained from EU national dashboards and websites owned and operated by National Health Authorities. Additionally, data from existing regional/local, and non-EU sources are included. The summarised information in this bulletin is based on online access, with the most recent retrieval performed on 24 May 2024.

AUSTRIA

Last data update: 15 May 2024

Austria's monitoring of SARS-CoV-2 involves 48 strategically chosen sewage treatment plants, encompassing over 58% of the country's population.

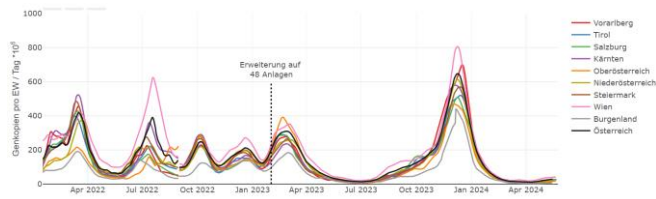
SARS-CoV-2: Based on the most recent information, the trend indicator is slightly higher than one, indicating an increase in pathogen activity. The viral load remains very low, with the most prevalent variants identified as KP.2, JN.1.1, and JN.1.4, accounting for 60%, 15%, and 15% of all reported cases, respectively.

Other pathogens: no information available.

FLiRT variants: In the course of the Austrian WW surveillance program, since March 2024, there has been a steady increase in breadth (fraction of positive WWTP) and height (mutation frequencies) of the combined occurrence of the mutation pair S:R346T, S:F456L, indicative of variants such as KP.2, JN.1.16.1, KS.1, among others. Furthermore, since the end of April 2024, an even more pronounced increase in breadth and height of the combined occurrence of the mutation triplet S:R346T, S:F456L, and S:S31del has been observed.

In particular, in the city of Vienna, approximately 50% of the SARS-CoV-2 signal can be attributed to the KP.2 variant.

Source: [Austria - Dashboard](#)



Person-weighted trends in the federal states (and Austria as a whole).

Source: <https://abwassermonitoring.at/dashboard/>

BELGIUM

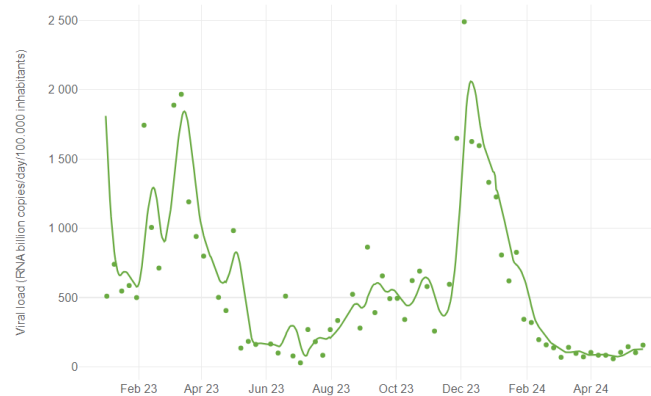
Last data update: 20 May 2024

The surveillance program encompasses 38% of the Belgian population, involving the collection of wastewater samples once a week from the influent of 30 wastewater treatment plants distributed across Belgium, primarily in high population density areas.

SARS-CoV-2: Based on the most recent results from week 21, the viral load is currently at a low level compared to the 9th wave. At the individual catchment areas level, out of the 30 areas covered, the number of treatment plants on alert for the different indicators are: 17 for the Increasing Trend indicator, 1 for the Fast Increase indicator, and 3 for the High Circulation indicator.

Other pathogens: no information available.

Source: [Belgium - Dashboard](#)



Evolution of viral load in Belgium.

Source: <https://wastewater.sciensano.be/dashboard/covid19/en/>

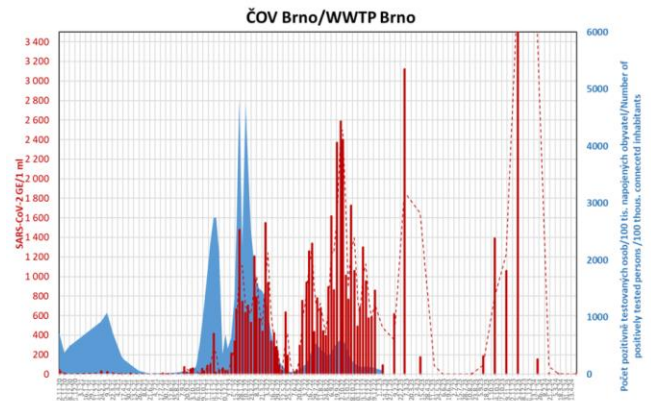
CZECH REPUBLIC

Last data update: 29 April 2024

Systematic monitoring in the Czech Republic ended in December 2022. Since January 2023, the TGM WRI, v.v.i. laboratory in Brno has been performing an indicative determination of SARS-CoV-2 RNA at the inlet to the Brno WWTP once a month. In March and

April 2024, SARS-CoV-2 RNA values continued to decrease to values at the level of the detection limit of the method.

Source: [Czech - Dashboard](#)



Development in the period 2023-2024 at the Brno WWTP.

Source:

<https://heis.vuv.cz/data/webmap/datovesady/projekty/covmon/default.asp?lan=cs&tab=6&wmap=>

DENMARK

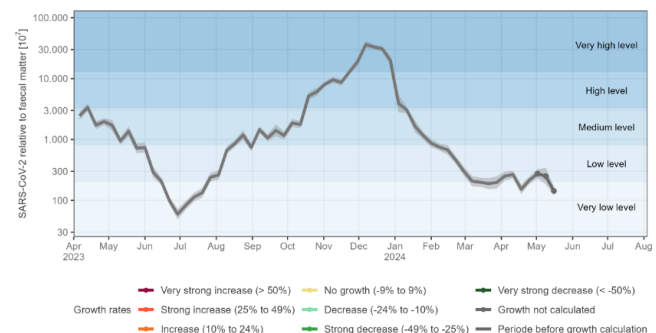
Last data update: 22 May 2024

For the national wastewater surveillance of SARS-CoV-2 in Denmark, 29 samples are collected twice a week from 28 treatment plants. The wastewater results are aggregated for the entire country, the five regions, and each sampling location.

SARS-CoV-2: In week 21, the concentration of SARS-CoV-2 in wastewater was very low. As a result, the calculation of the growth rate became uncertain.

Other pathogens: no information available.

Source: [Denmark - Dashboard](#)



Concentration of SARS-CoV-2 in the wastewater, aggregate for all the sampling sites in Denmark

Source: <https://en.ssi.dk/covid-19/national-surveillance-of-sars-cov-2-in-wastewater>

FINLAND

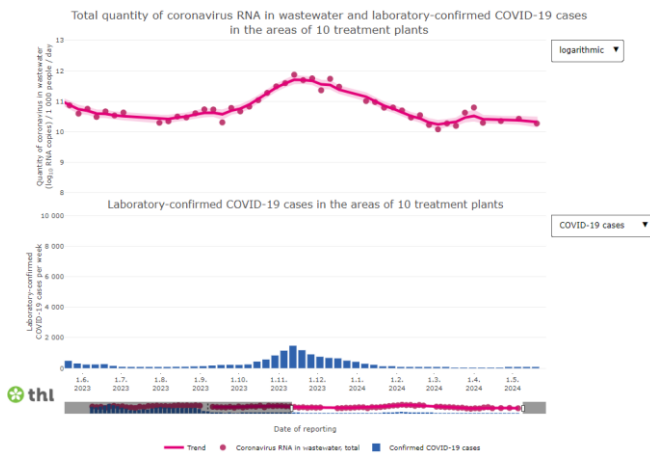
Last data update: 24 May 2024

Various wastewater treatment plants across different regions of Finland actively contribute to the monitoring efforts. Presently, about 44% of the wastewater generated by the Finnish population is included in the wastewater monitoring initiative.

SARS-CoV-2: The results of monitoring coronavirus in wastewater are available at both the local and national levels. A statistical model is used to estimate trends, which show that there is a stable pattern in week 21. The concentration of SARS-CoV-2 in wastewater remains low during this week.

Other pathogens: The results of influenza A, influenza B, and RSV are publicly available at the municipal level. Quantitative results from the samples are displayed but are currently available in Finnish only.

Source: [Finland - Dashboard](#)



Total quantity of coronavirus in wastewater and laboratory-confirmed COVID-19 cases.

Source:

https://www.thl.fi/episeuranta/jatevesi/wastewater_weekly_report.html

GERMANY

Last data update: 15 May 2024

The viral load of SARS-CoV-2 in wastewater is currently assessed at 148 wastewater treatment plants, providing a coverage for approximately 32 % of the population. The number of reporting locations fluctuates over time.

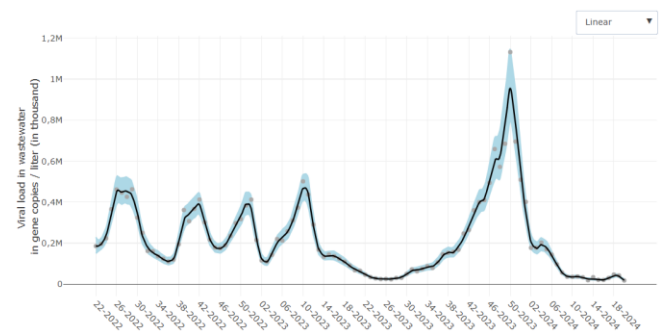
SARS-CoV-2: In calendar week 20, data from 101 sites were available. The averaged SARS-CoV-2 viral load across all reporting WWTPs has remained stable over the past 4 weeks. A trend could be calculated for 22 sites, with 9 sites showing an increasing viral load. The JN.1 variant continues to be the dominant variant at all 8 selected locations.

Other pathogens: no information available.

FLiRT variants: In Germany, there has been an increase in the FLiRT variant KP.2 at some sites. Currently, KP.1 is not classified as a Variant of Concern (VOC), Variant Under Monitoring (VUM), or Variant of Interest (VOI), but it is included under JN.1 in the dashboard graph. However, it is still present.

Moreover, the Technical University of Darmstadt has been observing FLiRT variants since the weekly report from May 6th. The report highlights the presence of the following FLiRT variants, KP.1, KP.1.1, KP.1.1.1, KP.2.10, KP.2.6, and KP.2.9, in multiple cities across Germany.

Source: [Germany - Dashboard](#)



Mean viral load in wastewater

Source:

<https://www.rki.de/EN/Content/Institute/DepartmentsUnits/InfDiseaseEpidem/Div32/WastewaterSurveillance/WastewaterSurveillance.html>

GREECE

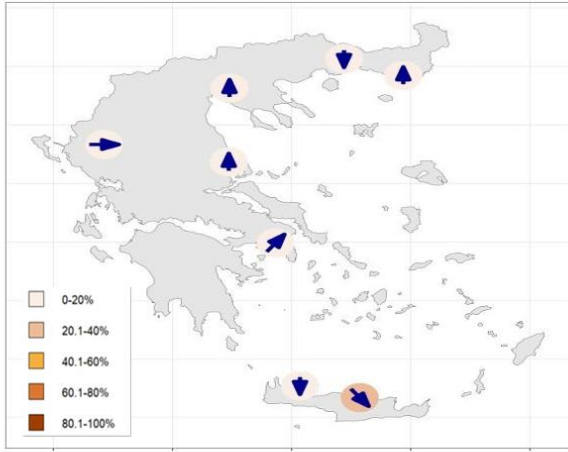
Last data update: 12 May 2024

This website contains data from laboratory tests conducted by the National Wastewater Epidemiology Network for monitoring the presence of SARS-CoV-2 virus in urban wastewater. The network operates under the coordination of EODY and the samples are collected from the Region of Attica and 9 other cities.

SARS-CoV-2 During week 19, viral load surveillance in municipal wastewater indicated a decrease in SARS-CoV-2 virus levels in 3 out of 9 areas, while it increased in 6.

Other pathogens: no information available.

Source: [Greece - Dashboard](#)



Εβδομαδιαία μεταβολή: ↑: άνοδος >30% ↓: πτώση >30% →: οριακή άνοδος (+10 έως +30%) ←: οριακή πτώση (-10 έως -30%) ↔: σταθεροποίηση (+/-10%)

Viral load levels in municipal wastewater during week 15/2024

Source:

<https://eody.gov.gr/wp-content/uploads/2024/05/ekthesi-epitirisis-anapneustikon-ion-2024-20.pdf>

HUNGARY

Last data update: 23 May 2024

The data for wastewater monitoring in Hungary are obtained from three wastewater plants serving the entire area of Budapest and a portion of the agglomeration. Additionally, wastewater from five other agglomeration settlements is examined as a combined sample. Collectively, these analyses encompass over 40% of the domestic population. The weekly report is currently only available in Hungarian.

SARS-CoV-2: In week 20, the concentration of SARS-CoV-2 in wastewater remained stagnant at a national level, with consistently low values. From February, due to the continuous decrease in the concentration of the SARS-CoV-2 genetic material, the wastewater samples were no longer suitable for variant testing.

Other pathogens: Influenza A is monitored weekly. The national average concentration of influenza A remained constant at the national average even into the 20th week.

Source: [Hungary - Dashboard](#)



Weighted national average of the number of SARS-CoV-2 copies.

Source: <https://www.nnk.gov.hu/index.php/koronavirus/szenyvizvizsgalatok>

IRELAND

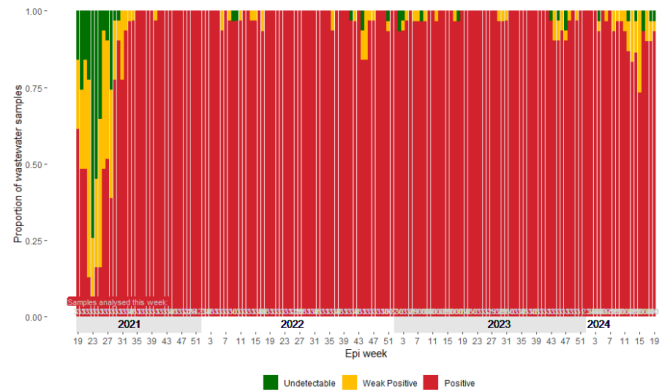
Last data update: 17 May 2024

Since January 2023, Ireland's National Wastewater Surveillance Programme has been conducting weekly sampling in 30 wastewater catchment areas. The 30 catchment areas, covering 70% of the population connected to public wastewater treatment facilities, are distributed across all regions of Ireland.

SARS-CoV-2: In week 19, samples from 29 out of 30 wastewater catchment areas were received and analysed. SARS-CoV-2 RNA was detected in 28 of these areas, accounting for 96.6%. 26 sites showed stable viral loads, while 2 sites exhibited a decrease in viral load ranging from 10% to 50%.

Other pathogens: no information available.

Source: [Ireland - Dashboard](#)



Wastewater SARS-CoV-2 detections in Ireland

Source: <https://www.hpsc.ie/a-z/nationalwastewatersurveillanceprogramme/>

ITALY

Last data update: 12 January 2024

Wastewater monitoring in Italy is conducted through Flash Surveys, comprising monthly sampling campaigns at various locations across the country over a short duration. Monitoring results are reported approximately every two months, and there is an average delay of a few months from sample collection to reporting.

SARS-CoV-2: During the week of January 8th to January 12th, 2024, a total of 91 wastewater samples were collected from 14 regions and 2 autonomous provinces (AP). Out of the 86 samples analysed, 83 (96.5%) tested positive for SARS-CoV-2. Mutations characteristic of the Omicron variant were

identified in 12 of these regions/AP, indicating that the Omicron JN.1* lineage is prevalent in week 2.

Other pathogens: no information available.

Source: [Italy - Dashboard](#)

LATVIA

Last data update: 17 May 2024

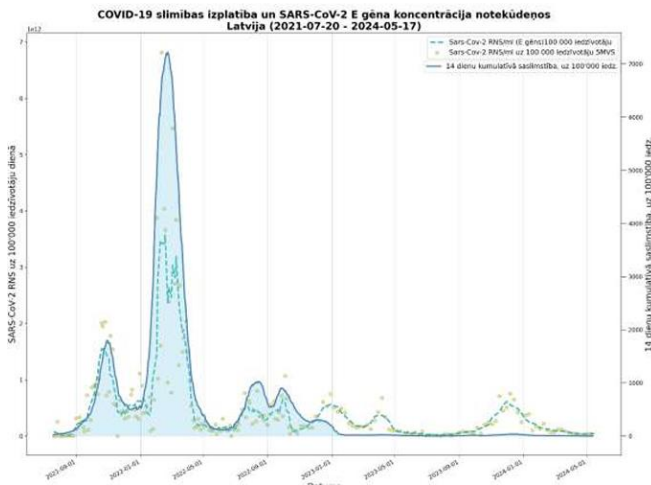
The national monitoring program in Latvia focuses on identifying the presence of SARS-CoV-2 in wastewater across municipalities. Twice a week, untreated wastewater samples are gathered from various facilities within municipal centralized wastewater collection systems. The weekly report is currently only available in Latvian.

SARS-CoV-2: On a national scale, the RNA concentration in Latvia is moderately increasing overall. The latest data on prevalent variants at each wastewater facility was released in week 18, showing the predominance of the JN.1 variant across all wastewater sites.

Other pathogens: no information available.

FLiRT variants: No KP.1 or any of the FLiRT variants have been detected in Latvia's wastewater recently.

Source: [Latvia - Dashboard](#)



Spread of COVID-19 and detection of SARS-CoV-2 in wastewater.

Source: <https://bior.lv/par-mums/jaunumi/notekudenu-monitorings-covid-19-izplatibas-noteiksanai>

LITHUANIA

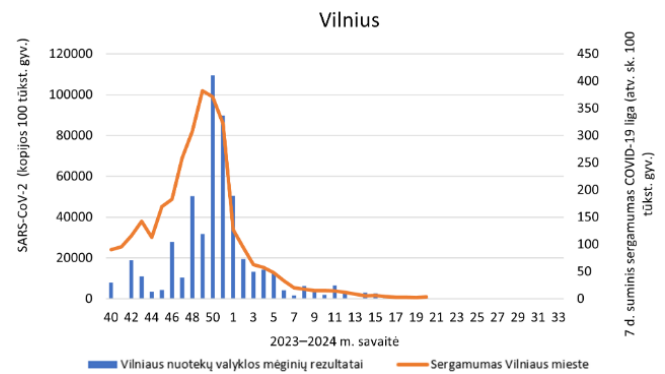
Last data update: 21 May 2024

Lithuania has implemented a wastewater surveillance system to detect the SARS-CoV-2 virus and its variants since November 2022. Wastewater samples are collected weekly from three treatment plants.

SARS-CoV-2: Concentrations of SARS-CoV-2 have been updated to week 20 for each facility individually. No trends have been reported.

Other pathogens: no information available

Source: [Lithuania - Dashboard](#)



Vilnius City Wastewater Treatment Plant (copies/ 100 000 pop.)

Source: <https://npsc.lrv.lt/en/information-on-covid-19-and-flu/covid-19/wastewater-surveillance-of-sars-cov-2/monitoring-results-2023-2024/>

LUXEMBOURG

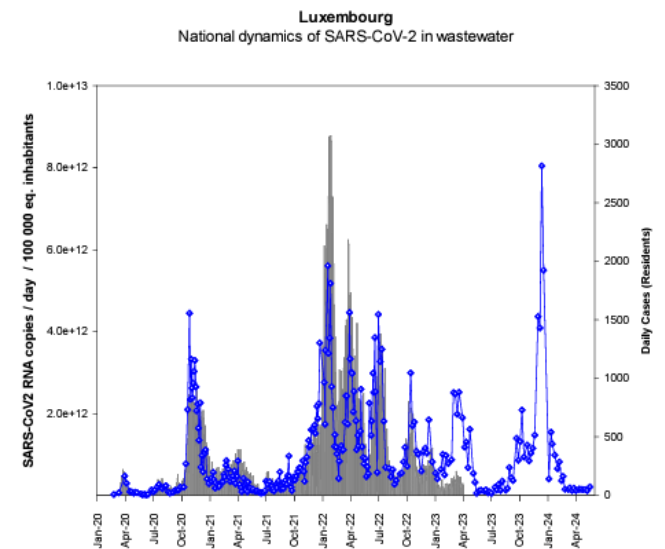
Last data update: 13 May 2024

The program for monitoring the evolution of COVID-19 in wastewater in Luxembourg involves the collection of samples from eight strategically located wastewater treatment plants.

SARS-CoV-2: During weeks 19 and 20, at the national level, the measured SARS-CoV-2 RNA levels remain very low and stable. In some WWTPs, SARS-CoV-2 levels are below the limit of quantification and even below the limit of detection.

Other pathogens: no information available.

Source: [Luxembourg - Dashboard](#)



Cumulative SARS-CoV-2 flux (blue dots) and daily confirmed cases (grey squares)

Source: <https://www.list.lu/en/covid-19/coronastep/>

NETHERLANDS

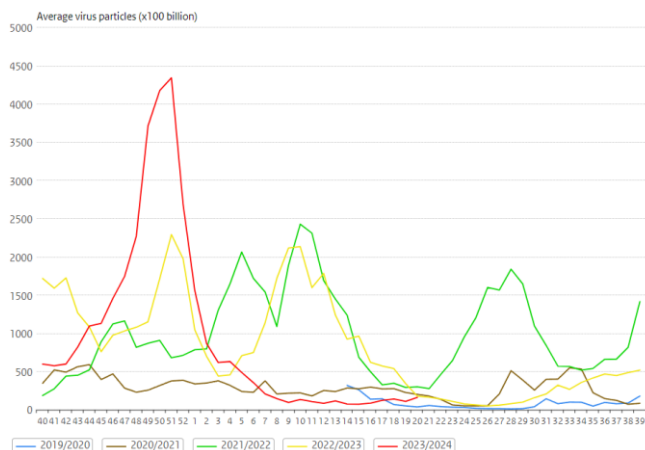
Last data update: 16 May 2024

Wastewater samples are gathered at wastewater treatment plants throughout the Netherlands, ensuring comprehensive coverage.

SARS-CoV-2: The circulation of the SARS-CoV-2 coronavirus is currently minimal. The national average viral load detected in wastewater surveillance increased in the first four days of week 20 compared to the previous week, but it still remains low. Currently, wastewater surveillance mainly indicates the presence of the JN.1 variant and its sub-variants.

Other pathogens: no information available.

Source: [Netherlands - Dashboard](#)



Average number of virus particles (x100 billion) over time

Source: <https://coronadashboard.government.nl/>

SLOVAKIA

Last data update: 13 May 2024

Wastewater surveillance for the presence of SARS-CoV-2 is conducted on a weekly basis in each region of Slovakia, with over 55 wastewater treatment plants being part of the project. Throughout the year, the monitoring intensity is adjusted based on the prevailing epidemiological situation.

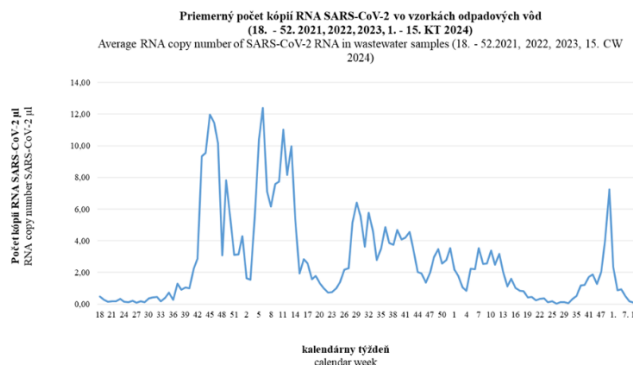
SARS-CoV-2: During week 15, 24 samples were examined for the presence of the SARS-CoV-2 virus. Out of these, 8 samples tested negative, 7 samples had borderline values, and 9 samples showed an increase in the number of viral RNA copies. Overall, the viral load in wastewater is very low, with a slight

increase compared to the analyses from the 13th week.

Other pathogens: no information available.

FLiRT variants: At present, most of the wastewater samples are negative or show very low levels of SARS-CoV-2. Only clinical samples were sequenced, and the FLiRT variants were not detected.

Source: [Slovakia - Dashboard](#)



Average copy number of SARS-CoV-2 RNS in wastewater samples.

Source: <https://www.uvzsr.sk/en/web/uvzen/wastewater-monitoring>

SLOVENIA

Last data update: 17 May 2024

From autumn 2022 and throughout 2024, Slovenia has been consistently monitoring SARS-CoV-2 in wastewater, using samples from 16 waste treatment plants across the nation. This monitoring network reaches about 34% of the Slovenian population and involves weekly sampling.

SARS-CoV-2: There are no updates for the current month available yet.

Other pathogens: no information available.

FLiRT variants: The viral load of SARS-CoV-2 in wastewater is low, making sequencing impossible in most samples. However, neither KP.1 nor any of the FLiRT variants have been detected in wastewater.

Source: [Slovenia - Dashboard](#)

SPAIN

Last data update: 11 May 2024

Wastewater surveillance in Spain involves the examination of the presence and evolution of the genetic material of SARS-CoV-2 RNA and the predominant variants in all treatment plants, totalling 54 facilities distributed throughout the country.

SARS-CoV-2: The summary report and dashboard are available in Spanish. The latest available data spans from April 28 to May 11, 2024. The summary results provided by each WWTP include whether the virus is present in the wastewater and the trend compared to the previous weeks. Samples from 52 WWTPs have been analysed: 52% of the WWTPs indicate a stable trend, 42% show an increasing trend, and 6% show a decreasing trend. The BA.2.86 subvariant remains dominant.

Other pathogens: no information available.

FLiRT variants: FLiRT variants have been found in 26 out of 54 sequenced WWTPs samples taken during April. Recent preliminary results using a new duplex RT-qPCR for the detection of del31S in the Spike (present in some FLiRT variants) have detected this deletion in 8 out of 9 WWTPs samples.

Moreover, the Ministry of Health and the University of Barcelona reported the detection of FLiRT variants in Spain, particularly in Catalonia and Madrid, since mid-March. By mid-May, these variants had become dominant in many locations. The KP.1 variant was first detected on April 15.

Source: [Spain - Dashboard](#)

Tabla 1. Resumen de los resultados en la entrada para SARS-CoV-2 y evolución por EDAR

Código EDAR	EDAR	Municipio	Resultado SARS-CoV-2	Clasificación respecto al histórico ¹	Evolución respecto al muestreo anterior ²	Ulog de diferencia	Precip. (mm) día muestreo / anterior
EDAR_01	PINEDO 1	VALENCIA	Positivo		Estable ³	-0,25	
EDAR_02	DON BENITO - VVA. DE LA SERENA	DON BENITO	Positivo		Aumento	0,72	
EDAR_03	LA GOLONDRINA	CÓRDOBA	Positivo		Aumento	0,42	
EDAR_04	GRANADA SUR	GRANADA	Positivo		Estable	-0,20	0,1
EDAR_05	REZA	ORENSE	Positivo		Aumento	0,82	22,8
EDAR_06	GUADALHORCE	MÁLAGA	Positivo		Estable	0,34	6,5
EDAR_07	LA CHINA	MADRID	Positivo		Estable	-0,31	
EDAR_08	LA GAVIA	MADRID	Positivo		Estable	0,21	
EDAR_09	TORREJÓN	TORREJÓN DE ARDOZ	Positivo		Estable	-0,34	
EDAR_10	SAN JERÓNIMO	SEVILLA	Positivo		Aumento	0,71	
EDAR_11	TUDELA	TUDELA	Positivo		Aumento	0,89	
EDAR_12	CRISPIJANA	VITORIA	Positivo		Estable	-0,14	0,4
EDAR_13	GALINDO	BILBAO	Positivo		Estable	0,10	
EDAR_14	LOGROÑO	LOGROÑO	Positivo		Disminución significativa	-1,42	10,2
EDAR_15	LA FERRAZ	2406/0774	Positivo		Estable	0,27	0,6

Summary of SARS-CoV-2 results and evolution by WWTP

Source: <https://www.miteco.gob.es/en/agua/temas/concesiones-y-autorizaciones/vertidos-de-aguas-residuales/alerta-temprana-covid19/vatar-covid19-informes-actualizados.html>

SWEDEN

Last data update: 13 May 2024

The surveillance of SARS-CoV-2 in wastewater is conducted through a collaboration between the Public Health Agency of Sweden and the Swedish University of Agricultural Sciences (SEEC-SLU). Sampling takes place at 18 different sites covering 43% of the population on a weekly basis.

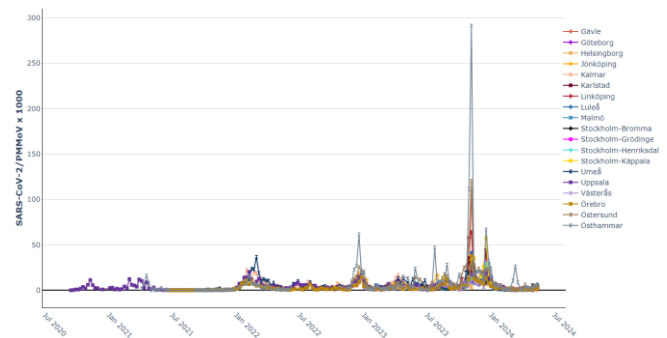
SARS-CoV-2: SARS-CoV-2 data are updated to week 20 through a plot, where a slowly increasing trend in the viral level can be observed. However, the

summary report, which is only available in Swedish, still needs to be updated with the latest information dating back to August 2023.

Other pathogens: Enteric viruses are measured in Gothenburg and include enteroviruses, adenoviruses, GG2, astroviruses, sapoviruses, and pepper mild virus. The results are updated to week 13. Influenza A and influenza B viruses are quantified weekly in multiple cities across Sweden, and latest results available are dated 13 May 2024.

FLiRT variants: In the wastewater samples collected up to week 16, an increasing trend in the detection of FLiRT mutations (F456L and R346T) has been observed since the beginning of the year. There is also a growing presence of individual variants like KP.2. However, the analysis is hindered by low viral levels and overall low data quality, making it important to interpret these trends with caution.

Source: [Sweden - Dashboard](#)



Levels of SARS-CoV-2 virus in multiple cities across Sweden

Source:

https://www.pathogens.se/dashboards/wastewater/covid_quantification/

REGIONAL EU DATA

The EU member states listed below furnish local or regional data regarding the surveillance of SARS-CoV-2 in wastewater for specific areas within their respective countries. The accompanying list includes accessible databases, along with their latest updates.

Germany

Berlin

The dashboard presents wastewater monitoring data from 4 treatment plants in Berlin. It illustrates SARS-CoV-2 data results in gene copies per litre of wastewater sampled from each plant. The analysis also includes circulating virus variants in Berlin,

presented as a percentage of the total load. The data was last updated on May 14, 2024.

FLIRT variants: The current levels of SARS-CoV-2 PCR in Berlin are at a 3-year low, and many of the samples cannot be successfully sequenced. As a result, KP represents only a small proportion of the low SARS-CoV-2 levels. Additionally, some samples that were analyzed in April were actually collected in March. KP.2 was identified in early March, while KP.3 was defined in mid-March.

Source: [Germany, Berlin – Local dashboard](#)

Bavaria

The dashboard presents wastewater monitoring data from the German state of Bavaria, showcasing the SARS-CoV-2 trend in wastewater from thirty municipalities within Bavaria. Additionally, it displays the viral load and variants of SARS-CoV-2 in wastewater for Munich. The most recent measurements are from May 15th, 2024.

Source: [Germany, Bavaria – Local dashboard](#)

Poland

The website showcases surveillance data of the SARS-CoV-2 virus in sewage within the Warsaw agglomeration. The findings are illustrated through graphs indicating the normalized number of copies at four fixed locations in the sewage network. Updates to the data occur weekly, with the information currently extending to May 16, 2024. The website is accessible in Polish.

Source: [Poland – Local dashboard](#)

Spain

Catalonia

The dashboard presents wastewater monitoring data for Catalonia. The progression of viral load in wastewater is depicted either by municipality or as the geometric mean of all wastewater treatment plants (WWTPs) in Catalonia. The most recent recorded data is from January 7, 2024.

Source: [Spain, Catalonia – Local dashboard](#)

Madrid

The website presents visualizations of SARS-CoV-2 data in wastewater for the [Community of Madrid](#). A map illustrating the progression of SARS-CoV-2 presence in wastewater across municipalities/districts is updated monthly, with the latest update on April 30, 2024. Additionally, a smaller network is

consistently monitored on a weekly basis. Reports are available in Spanish.

Source: [Spain, Madrid – Local dashboard](#)

EU NEIGHBOURING COUNTRIES

This section provides wastewater monitoring details from neighbouring countries of the EU participating as observers in the EU National Contact Points (NCP) Mechanism. Links to national or local dashboards/websites and information about the latest updates are included.

Türkiye

Last data update: 21 April 2024

This website provides information on wastewater monitoring data in Türkiye, explicitly reporting SARS-CoV-2 viral load results. PDF reports are published for various regions (21 pilot cities), while Istanbul has its dedicated report. Wastewater samples are taken weekly from the city of Istanbul and bi-weekly from the other 21 cities, providing a coverage for approximately 41% of the population.

SARS-CoV-2: The regional report has not been updated. Results for specific wastewater treatment plants in Istanbul have been updated to week 16, confirming low daily viral loads.

Other pathogens: no information available.

Source: [Türkiye – Dashboard](#)



SARS-CoV-2 viral load distribution map

Source: <https://covid19.tarimorman.gov.tr/Home/Index#>

OTHERS

This section contains details on wastewater monitoring from non-EU countries. It includes links to national or local dashboards/websites and the latest updates, organised by continent.

EUROPE

Scotland

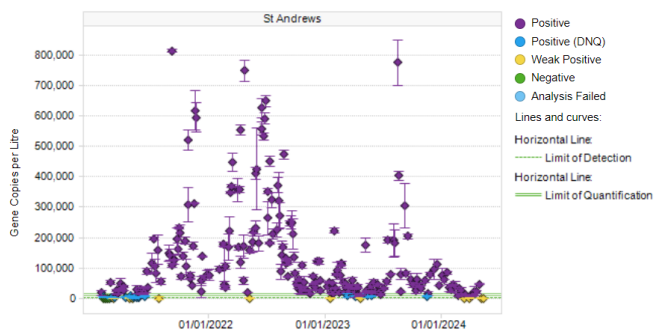
Last data update: 13 May 2024

The dashboard displays data on SARS-CoV-2 in wastewater collected from 106 treatment plants, collectively representing 70-80% of the population.

SARS-CoV-2: Most locations are tested weekly, but this can be increased when local outbreaks are apparent. Users can explore individual sampling sites through the platform. Additionally, national-level results are available, organized by the 14 Scottish Health Areas.

Other pathogens: no information available.

Source: [Scotland – Dashboard](#)



Gene copies per litre at a selected location

Source: <https://informatics.sepa.org.uk/RNAmonitoring/>

Switzerland

Last data update: 19 May 2024

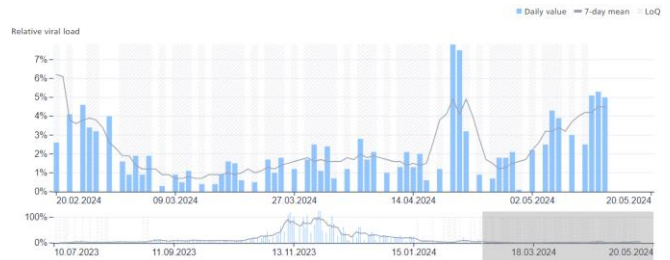
The information published in the dashboard is based on data from Switzerland's national wastewater monitoring program. The program has been monitoring the viral load of SARS-CoV-2 since January 2022. Since July 2023, wastewater monitoring has been reduced to 14 participating WWTPs in Switzerland, covering a quarter of the population, and one WWTP in the Principality of Liechtenstein.

SARS-CoV-2: Each region reports relative and absolute viral loads and trends individually. The trend is stagnant in 11 regions, strongly increasing in 2 regions, and increasing in 1 region. A stable trend was observed in 1 region.

Other pathogens: Five samples per week are analysed for influenza A and B as well as RSV in wastewater samples from participating treatment plants. The relative and absolute viral loads and trends are reported individually for each region.

Currently, the trends are showing stagnation for the all of the regions.

Source: [Switzerland – Dashboard](#)



Relative viral load of SARS-CoV-2 at a selected location

Source: <https://idd.bag.admin.ch/topics/respiratory-pathogens#waste-water>

United Kingdom

Dashboard is no longer updated

FLIRT variants: The Bangor University reported that in Wales, the KP sublineages appear to be increasing since their initial appearance in the week starting 25 March 2024.

ASIA

India

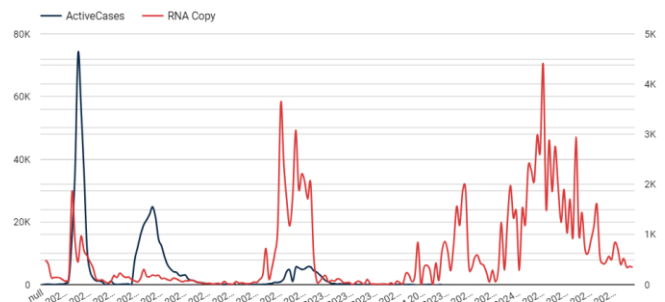
Last data update: 12 May 2024

The dashboard displays the concentration of SARS-CoV-2 RNA copies per litre of wastewater in five major cities of Gujarat, India. Samples are collected from 40 wastewater treatment plants. The Lineage Prevalence section is also available.

SARS-CoV-2: SARS-CoV-2 RNA copies have been updated as of Week 20, and the virus concentration remains stable compared to the previous weeks. Information on variants has been updated to the end of March 2024, where variant JN.1.1.5 dominated.

Other pathogens: no information available.

Source: [India – Dashboard](#)



RNA copy and active cases in

Source: <https://lookerstudio.google.com/u/0/reporting/34a41c12-e9dc-4de9-94b7-a6203bcd6331/page/elQzC>

Japan

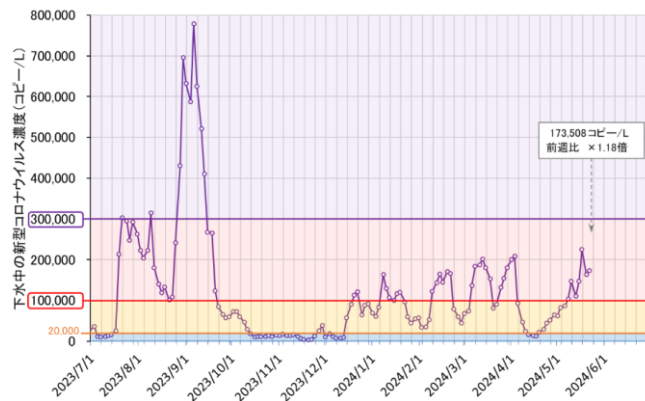
Last data update: 24 May 2024

The information presented on this website reveals the outcomes of regular assessments of COVID concentration in the wastewater of Komatsu City.

SARS-CoV-2: During week 20, there is an almost unchanged trend in virus concentration in wastewater compared to the previous week.

Other pathogens: no information available.

Source: [Japan - Dashboard](#)



Virus concentration expressed in copies/liter

Source: <https://www.city.komatsu.lg.jp/soshiki/1042/surveillance/14588.html>

OCEANIA

Australia

Last data update: 17 May 2024

The dashboard provides an analysis of SARS-CoV-2 trends in the Perth Metropolitan area of Western Australia from July 2022. Wastewater samples are gathered twice a week from three metropolitan wastewater treatment plants in Perth, which collectively serve about 79% of the city's population.

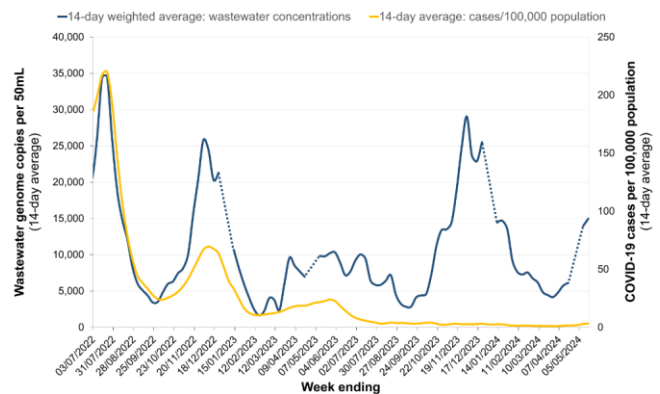
SARS-CoV-2: Concentrations of the virus genome in wastewater are displayed as a 14-day moving average and have been updated to week 20. No specific trend is indicated. During week 20, the Omicron sub-variant JN.1.X recombinants predominated in all three metropolitan wastewater sites.

Other pathogens: no information available.

FLIRT variants: According to the latest public report from Victoria Australia ([Victoria Covid-19 surveillance report](#)), there is an increasing presence of KP.3 on a background of JN. As of May 3rd, KP.3 has been detected in Victorian wastewater at approximately 23% in the most recent samples. These results are

provided to the Victorian Department of Health by the WEHI laboratory.

Source: [Australia - Dashboard](#)



SARS-CoV-2 wastewater surveillance trends and reported COVID-19 cases in Perth Metropolitan area

Source: https://www.health.wa.gov.au/articles/a_e/coronavirus/covid19-wastewater-surveillance

New Zealand

Last data update: 19 May 2024

The dashboard was launched in 2020 to help the public monitor potential COVID-19 risks in their local areas using easy-to-understand data visualization. Samples are collected twice a week from 43 sites across New Zealand, covering 68% of the population. The presence of SARS-CoV-2 RNA in the sample is determined using RT-qPCR with the N-gene of the SARS-CoV-2 viral genome. Variant analysis is performed on a subset of samples from specific wastewater sites, known as 'sentinel sites'.

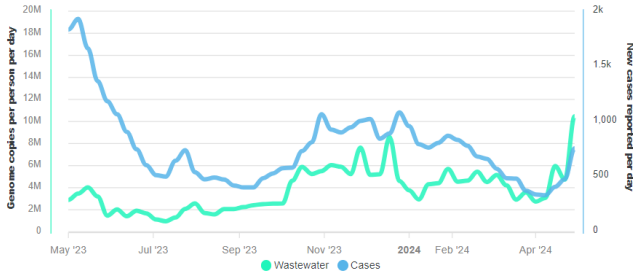
SARS-CoV-2: In week 20, all 43 testing sites showed positive results for SARS-CoV-2. The dominant variant, JN.1, accounted for approximately 57% of the cases, followed by KP.3 at 22%. Trends are showed on a map, which indicates that the concentrations are increasing in most locations when comparing week 20 to the previous week.

Other pathogens: no information available.

FLIRT variants: The method used in the laboratory for wastewater sequencing (short amplicon) cannot distinguish KP.1 from the JN.1.11 "constellation". However, KP.2 and KP.3 were detected, and they can be distinguished from other JN.1 lineages. The amplicon does not cover any mutation unique to LB.1. KP.1 is present in clinical cases in New Zealand, but it is currently at a low level and is not a specific focus of surveillance.

Source: [New Zealand - Dashboard](#)

SARS-CoV-2 in Wastewater and Reported COVID-19 Case Numbers
National, last 12 months, on linear scale



Average SARS-CoV-2 genome copies detected per person per day in wastewater for New Zealand, along with the reported case numbers.

Source: <https://poops.nz/>

NORTH AMERICA

Canada

Last data update: 14 May 2024

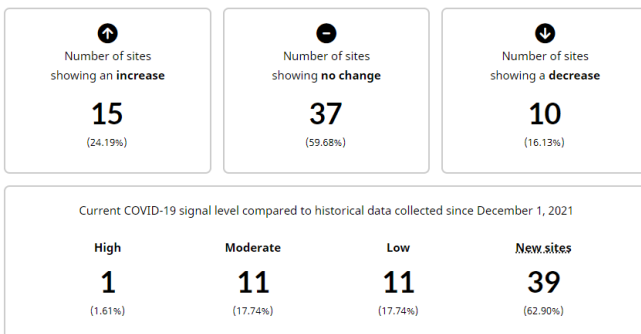
The dashboard provides data on the levels of COVID-19 and its variants found in the wastewater (sewage) of various communities across Canada. Currently, 62 sites in Canada submit sewage samples for processing, representing 49.58% of the Canadian population. Additionally, the dashboard includes links to 33 Canadian wastewater COVID-19 surveillance dashboards and websites, which are led by provincial, territorial, and academic partners across Canada.

SARS-CoV-2: The trend data are presented as 7-day rolling averages. In week 20, 15 sites (24.19%) showed an increase, 10 sites (16.13%) showed a decrease, and 37 sites (59.68%) showed no change in their COVID-19 viral signals. During week 16, the dominant variant is JN.1 (78.8%), including all descendant variants.

Other pathogens: no information available.

FLiRT variants: The Ontario wastewater surveillance initiative has detected the presence of KP's, and their evolution has been continuously monitored through sequencing since March.

Source: [Canada - Dashboard](#)



Data tiles of Canadian dashboard

Source: <https://health-infobase.canada.ca/covid-19/wastewater/>

United States

Last data update: 11 May 2024

The National Wastewater Surveillance System collects and analyses wastewater samples on a weekly basis. This monitoring is conducted in all 50 states, 3 territories, and 5 tribal organizations. In the last two months, 1,239 sites have reported to the NWSS, covering an estimated 38% of the U.S. population.

SARS-CoV-2: Nationally, the wastewater viral activity level for COVID-19 is currently minimal. In week 18, the predominant variant is JN.1 with a percent share of 95%.

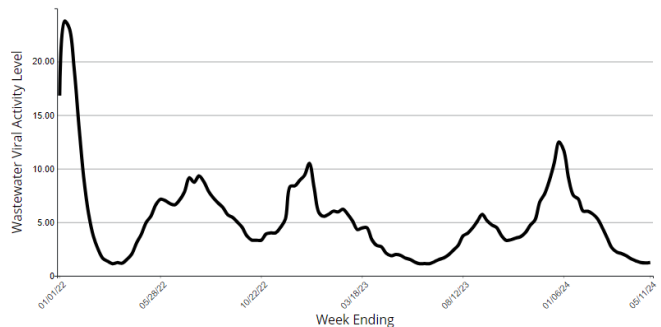
Other pathogens: MPOX is being monitored weekly in wastewater by communities, and participation is voluntary. Over the past 4 weeks (April 24, 2024 – May 21, 2024), most communities have reported no detection of MPOX in wastewater.

Influenza A is also being monitored weekly. During the two most recent weeks (April 28-May 11), 4 sites (2% of total sites) reported high levels of detection.

FLiRT variants: KP.1 and KP.2 have been detected in US wastewater. While KP.1 levels are low, there has been a gradual increase in KP.2 over the past few weeks. In week 21, KP.2 accounted for 19% of the COVID wastewater variants, surpassing the abundance threshold (less than 5%) for individual display on the dashboard.

Additionally, Verily retrospectively examined samples collected after April 22, 2024, within their network and filtered for an abundance of KP.1 + KP.2 >10%. This resulted in the identification of 18 US states that met this criterion.

Source: [United States - Dashboard](#)



COVID-19 Wastewater Viral Activity Level Over Time

Source: <https://covid.cdc.gov/covid-data-tracker/#wastewater-surveillance>

OTHER NEWS

Encyclopaedia cloacae

The EU Wastewater Observatory for Public Health has launched a new functionality called "*Encyclopaedia cloacae*". This tool provides information on the pathogens and other public health indicators that can be analysed in wastewater. This tool compiles evidence on various diseases and outlines how detecting them in wastewater can aid public health efforts.

<https://wastewater-observatory.jrc.ec.europa.eu/#/encyclopaedia-cloacae>

Join the *Encyclopaedia Cloacae* team and contribute to our cause! How can you contribute? Simply submit your suggested publication to us. After authenticating your submission, we will display the link to your paper for the respective pathogen or parameter. Additionally, you can send us your organization's logo along with the authorization to use it. We will then add your organization as an official contributor to our encyclopedia.

Ad-hoc bird flu bulletin

An ad-hoc bulletin has been released, detailing feedback on HPAI A(H5N1) virus detection in US dairy herds, and outlining wastewater surveillance strategy steps in response to the health threat.

<https://wastewater-observatory.jrc.ec.europa.eu/#/bulletin>

UPCOMING EVENTS

SINGAPORE INTERNATIONAL WATER WEEK 2024

18 – 22 June 2024 | Singapore

<https://www.siww.com.sg/>

GLOWACON Regional Conference Asia

June 24-28, 2024 | Singapore

PATHOGEN OF THE MONTH

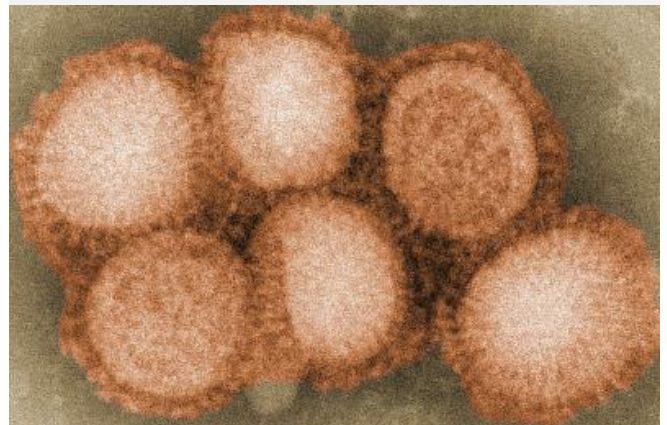
Avian influenza

Avian influenza, or bird flu, is a viral disease mainly affecting birds. It can range from mild to highly pathogenic forms, which can be deadly to birds and potentially transfer to humans. Human cases are rare but can pose a pandemic risk if the virus becomes easily transmissible between people. Symptoms in birds include breathing problems, reduced egg production, and high death rates. To prevent spread, infected flocks are often culled during outbreaks.

Do you have expertise in microbiology, virology, mycology, or parasitology? We invite you to enrich our Encyclopaedia Cloacae with your valuable insights.

To contribute, please visit the "**Add Your Knowledge**" area on the Encyclopaedia Cloacae. Together, we can build a richer, more comprehensive resource for everyone interested in the world of pathogens.

<https://wastewater-observatory.jrc.ec.europa.eu/#/encyclopaedia-cloacae>



DISCLAIMER

Information compiled by the European Commission's Joint Research Centre and enabled by the European Commission's Health Emergency Preparedness and Response Authority (HERA) as part of its activities on pandemic preparedness.

The information presented in this bulletin is for general informational purposes only. The European Commission assumes no responsibility for errors or omissions in the content. While efforts are made to keep the information accurate and up-to-date, the European Commission disclaims any responsibility for the reliability or completeness of the information contained in the online version of this bulletin. Users are advised to verify the information with official sources and attest only to the most recent online version.

We value our readers' contributions in keeping the monthly bulletin content accurate and relevant. Please help us by notifying us of any updates or additions to the list of dashboards

IMPORTANT NOTE

A great deal of additional dashboards and information for project-driven activities can be found here: <https://wastewater-observatory.jrc.ec.europa.eu/#/dashboards/4>

If you need to access dashboards that are no longer being updated, please refer to the list located at: <https://wastewater-observatory.jrc.ec.europa.eu/#/dashboards/6>

VERSION ATTESTATION

Readers are advised to attest only to the online version of this report, as it may be the most up-to-date and accurate representation of the content.

If you spot incomplete or incorrect data or want to see your activities included in this monthly bulletin, please mail to jrc-eu4s-deep@ec.europa.eu

COPYRIGHT

© European Union, 2024



The reuse policy of the European Commission documents is implemented by the Commission Decision 2011/833/EU of 12 December 2011 on the reuse of Commission documents (OJ L 330, 14.12.2011, p. 39). Unless otherwise noted, the reuse of this document is authorised under the Creative Commons Attribution 4.0 International (CC BY 4.0) licence (<https://creativecommons.org/licenses/by/4.0/>). This means that reuse is allowed provided appropriate credit is given and any changes are indicated.

CONTACT INFORMATION

JRC-EU4S-DEEP@ec.europa.eu.

